

TITLE 11 DEPARTMENT OF HEALTH - CHAPTER 62 WASTEWATER SYSTEMS

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SUBCHAPTER 1 PROHIBITIONS AND GENERAL REQUIREMENTS

/11-62-01 Preamble.

The state department of health seeks to insure that the disposal of wastewater does not contaminate or pollute any valuable water resource, does not give rise to public nuisance, and does not become a hazard or potential hazard to the public health, safety and welfare. The state department of health seeks to migrate towards an ultimate goal of regional sewage collection, treatment and disposal systems which are consistent with state and county wastewater planning policies. Off-site treatment and disposal systems, followed in priority by on-site systems, meeting health and environmental standards will be allowed whenever they are consistent with state and county wastewater planning policies and on the premise that these systems will eventually connect to regional sewage systems. Individual wastewater systems may be utilized in remote areas and in areas of low density. A goal has been established such that the construction of wastewater disposal systems depositing untreated sewage into the environment

will not be allowed after the year 2000. As a means to this end, upon the adoption of these rules, new publicly owned buildings shall utilize a method of sewage disposal other than cesspools. The state department of health seeks to work in close partnership with the counties on wastewater management matters, seeks to allow each county to participate in the implementation of these rules through the recommendations of a county wastewater advisory committee to the director, and seeks to encourage each county to assume complete administration of the wastewater treatment system program within their county. [Eff 12/10/88; comp AUG 30 1991] (Auth: HRS //321-11, 322-8(a), 342D-1, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-5, 342D-50)

/11-62-02 Purpose.

These rules seek to insure that the disposal of wastewater from wastewater treatment works and individual wastewater systems:

- (1) Does not contaminate or pollute any drinking water or potential drinking water supply, or the waters of any beaches, shores, ponds, lakes, streams, groundwater, or shellfish growing waters;
- (2) Does not encourage the harborage of insects, rodents or other possible vectors;
- (3) Does not give rise to nuisances;
- (4) Does not become a hazard or a potential hazard to public health, safety and welfare;
- (5) Contributes to the achievement of wastewater management goals contained in approved county water quality management plans; and
- (6) Reinforces state and county planning policies. [Eff 12/10/88; comp AUG 30 1991] (Auth: HRS //321-11, 322-8(a), 342D-1, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-5, 342D-50)

/11-62-03 Definitions.

As used in this chapter:

"Activated sludge process" means a biological wastewater treatment process in which a mixture of wastewater and microorganisms is agitated with induced aeration. Aeration supplies dissolved oxygen and wastewater supplies the organic substrate necessary for microorganism growth. This process includes sedimentation units which follow the aeration and where settled solids are withdrawn for disposal or returned to the aeration unit.

"Bedrock" means a continuous horizontal layer of hardened mineral deposits that does not support the growth of common plant life.

"Bedroom" means any room within a dwelling that might reasonably be used as a sleeping room.

"BOD5" means five days biochemical oxygen demand which is a standard test indicating the quantity of oxygen utilized by wastewater under controlled conditions of temperature and time.

"Building" means a structure, permanent or temporary, built, erected, and framed of component structural parts designed for the housing, shelter, workplace, enclosure or support of persons, animals or property of any kind.

"Building modification" means any changes to non-dwellings or to the living areas of dwellings that may result in the increase in wastewater flows or changes in the wastewater characteristics.

"Cesspool" means an excavation in the ground which receives untreated wastewater and is designed to retain the organic matter and solids discharging therein, but permits the liquid to seep through its bottom or sides to gain access to the underground formation. Further, it is an individual wastewater system which is designed to receive no more than 1000 gallons per day of domestic wastewater.

"Collection system" means the conveyance system, which includes the building and street sewer laterals, interceptor sewer, sewage pump station and force main, used to transport the sewage to the treatment unit.

"Composite sample" means sample(s) collected on regular intervals in proportion to the existing flow and then combined to form a sample representative of the flow over a period of time. A composite sample shall consist of at least four equally timed grab samples taken over twelve consecutive hours and proportioned according to the flow rate.

"Compost toilet" means a non-flush, waterless toilet that employs an aerobic composting process to treat toilet wastes.

"Confined work areas" means any area having a limited means of egress, which is subject to the accumulation of toxic or flammable contaminants or has an oxygen deficient atmosphere. Confined work areas include, but are not limited to, storage tanks, process vessels, bins, ventilation or exhaust ducts, sewers, underground utility vaults, tunnels, pipelines and open top spaces more than four feet in depth such as pits, tubs, vaults and vessels.

"Contractor" means the installer of a wastewater system or any part of a wastewater system.

"County" means any county of the state.

"Critical Wastewater Disposal Area (CWDA)" means an area where proposed cesspools are severely restricted or prohibited.

"CWDA maps" means the maps indicating the boundaries of the critical wastewater disposal areas established pursuant to section 11-62-05(a) and dated March 16, 1990. "Department" means the department of health.

"Director" means the director of health or the director's duly authorized agent.

"Disinfection" means a process to destroy, neutralize or inhibit the growth of pathogenic microbes.

"Disposal system" means any outfall sewer, seepage pit, cesspool, injection well, effluent irrigation system, soil absorption system, disposal trench, or other facility used in the disposal of wastewater, including any wastewater transmission lines, pumps, power, or other equipment associated with the ultimate disposal of wastewater.

"Distribution box" means a watertight chamber from which effluent from a treatment unit is distributed evenly to various portions of a disposal system.

"Domestic wastewater" means the wastewater derived from ordinary human habitation or human activities including, but not limited to, wastewater from dwellings, hotels, hospitals, and comfort stations.

"Dwelling" means any building which is wholly or partly used or intended to be used for living or sleeping by human occupants and includes, but is not limited to, hotels, apartment houses, lodging houses, single family houses, duplex houses, cluster houses, townhouses, and planned developments.

"Dwelling unit" means any habitable room or group of habitable rooms located within a dwelling and forming a single habitable unit with facilities which are used or intended to be used for living, sleeping, cooking and eating. "Engineer" means a professional engineer registered in the State of Hawaii and competent in the field of sanitary/environmental engineering.

"EPA" means the U.S. Environmental Protection Agency. "EPA's methods for chemical analysis of water and wastes" means the 1979 edition of "Methods for Chemical Analysis of Water and Wastes" as published by EPA.

"Evapotranspiration system" means a subsurface disposal system which relies on soil capillarity and plant uptake to dispose of treated effluent through surface evaporation and plant transpiration.

"Existing" means constructed prior to the effective date of this rule.

"Filter fabric" means a woven or spun-bonded sheet material used to impede or prevent the movement of sand, silt and clay through the filter material. This material shall be non-biodegradable, resistant to acids and alkalies within a pH range of 4 to 10, and resistant to common solvents.

"Grab sample" means a single discrete sample of wastewater collected at a particular time and place which represents the composition of the source at that time and place.

"Graywater" means liquid waste from a dwelling or other establishment produced by bathing, washdown, minor laundry and minor culinary operations, and specifically excluding toilet waste.

"Holding tank" means a nonportable, watertight closed vault to temporarily hold domestic wastewater.

"Household aerobic unit" means a watertight receptacle which receives domestic wastewater from dwellings or from other sources generating wastewater of a similar volume and strength, and retains solids, aerobically digests organic matter over a period of time, and allows the clarified effluent to discharge outside the tank into a disposal system.

"Individual wastewater system" means a facility which is designed to receive and dispose of no more than 1000 gallons per day of domestic wastewater. Individual wastewater systems may involve treatment processes and include, but are not limited to, septic tanks and household aerobic units with disposal systems and cesspools. Each individual wastewater system shall be an independent system and shall have all of its plumbing, treatment (if any), and disposal components separate from any other wastewater system.

"Injection well" means a driven or drilled shaft whose depth is greater than its widest surface dimension and which receives treated wastewater and permits such wastewater to seep through its bottom or sides to gain access to the underground formation.

"Living area" means the portion(s) of a dwelling unit including, but not limited to, the bedroom, kitchen, bathroom, living room, family room, covered lanai, den and library, but excluding the garage, carport, open lanai, fence and utility shed.

"Makai" means toward the sea or the area outside the Underground Injection Control (UIC) Line encircling the protected aquifer.

"Manual of Septic Tank Practice" means the United States Department of Health, Education and Welfare Publication No. (HSM) 72-10020, formerly known as "PHS Publication No. 526", revised in 1967.

"Mound system" means a soil absorption system which is installed in or below an artificially created mound or earth. "Non-domestic wastewater" means all wastewater excluding domestic wastewater.

"Owner" means a person(s) who has legal title to a treatment works or individual wastewater system, or duly authorized representative of the owner.

"Person" has the same meaning as defined in section 342D-1, HRS.

"Private" means not owned nor operated by a federal, state, or county authority.

"Proposed" means not constructed prior to the effective date of this rule.

"Public" means owned or operated by a federal, state, or county authority.

"Seepage pit" means an excavation in the ground which receives the discharge from treatment units and permits the effluent to seep through its bottom or sides to gain access to the underground formation.

"Septic tank" means a watertight receptacle which receives the raw wastewater and discharges a settled, partially treated effluent.

"Sewer" means a pipe or conduit and other appurtenances that carries wastewater from buildings to a specific point for treatment and disposal.

"Soil absorption" means a process which uses the soil to treat and dispose of effluent from a treatment unit.

"SS" means suspended solids and indicates the characteristic state of solids in wastewater.

"Standard methods" means the 16th edition, 1985, of "Standard Methods for the Examination of Water and Wastewater" as published by the American Water Works Association, American Public Health Association and the Water Pollution Control Federation.

"State waters" shall have the same meaning as defined in section 342D-1, HRS.

"Subsurface disposal system" means a disposal system which permits effluent to reach the underground geologic formation such as a seepage pit, cesspool,

injection well, soil absorption system or other facility used in the disposal of wastewater including any wastewater transmission lines, pumps, power or other equipment associated with the disposal of wastewater.

"Suitable soil" means a soil which acts as an effective filter in the removal of organisms and suspended solids before the effluent reaches any highly permeable earth formations, bedrock or groundwater.

"Ten States Standards" means the 1980 edition of the Recommended Standards for Individual Sewage Systems, a report by the committee of the Great Lakes-Upper Mississippi River Board of State Sanitary Engineers on the policies for review and approval of plans and specifications for individual wastewater systems.

"Treatment unit" means any plant, facility, or equipment used in the treatment of wastewater including the necessary pumps, power equipment, blowers, motors, holding tanks, flow splitter, and other process equipment.

"Treatment works" means any treatment unit and its associated collection system and disposal system, excluding individual wastewater systems.

"Wastewater" means any liquid waste, whether treated or not, and whether animal, mineral or vegetable, including agricultural, industrial and thermal wastes.

"Wastewater sludge" means the accumulated solids removed from wastewater by any liquid-solid separation process. Such solids may be part of the raw wastewater pumped from cesspools or generated by a wastewater treatment unit.

"Wastewater system" means the category of all wastewater disposal or wastewater treatment and disposal systems, including all wastewater treatment works and individual wastewater systems.

"Water pollution" shall have the same meaning as defined in section 342D-1, HRS.

"Watertight" means constructed so that no water can enter and discharge except through the inlet and outlet pipe respectively. [Eff 12/10/88; am and comp AUG 30 1991] (Auth: HRS //321-11, 342D-1, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-50)

/11-62-04 County wastewater advisory committee.

At the option of each county, a county wastewater advisory committee may be nominated by the mayor and established by the director. The county wastewater advisory committee in each county may include, but is not limited to representatives of the county water supply, public works, planning, and land utilization departments, labor and industry. The chief of the environmental management division on Oahu and the chief sanitarians on the neighbor islands shall serve as ex-officio members of their respective county committees. The department shall provide technical and support services for the committee. The primary role of the county wastewater advisory committee is to review and make recommendations, upon the request of the director, on the application of these rules on matters which are unique to each county, on the establishment of critical wastewater disposal areas, on proposals which are not specifically addressed in these rules, and on requests for variances. The county wastewater advisory committee's recommendation to the director shall be based on the application of these rules with respect to safeguarding public health. [Eff 12/10/88; am and comp AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-50)

/11-62-05 Critical wastewater disposal areas.

(a) On a county-by-county basis, the director may establish critical wastewater disposal areas based on one or more of the following concerns:

- (1) High water table;
- (2) Impermeable soil or rock formation;
- (3) Steep terrain;
- (4) Flood zone;
- (5) Protection of coastal waters and inland surface waters;
- (6) High rate of cesspool failures; and

(7) Protection of groundwater resources.

(b) The director may impose more stringent requirements than those specified in these rules for proposed wastewater systems located within any designated critical wastewater disposal area. Requirements that the director may impose include, but are not limited to, meeting higher effluent standards for wastewater systems, limiting the method of effluent disposal and requiring flow restriction devices on water fixtures.

(c) Proposed cesspools shall be severely restricted or prohibited in any designated critical wastewater disposal area.

(d) Areas designated as critical wastewater disposal areas pursuant to subsection (a) are indicated on the CWDA maps which are an integral part of this chapter. Copies of the maps are available for examination at the department's environmental management division and district health offices. [Eff 12/10/88; am and comp AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-50)

/11-62-06 General requirements.

(a) All buildings, used or occupied is a dwelling, a public building, or a place of assembly and generating wastewater, shall be connected to a wastewater system.

(b) All building(s) generating wastewater and located within or near proximity of an available public sewer system as determined by the director, shall connect to the public sewer.

(c) All wastewater systems shall be constructed and operated in accordance with this chapter.

(d) Buildings generating non-domestic wastewater shall meet the specific requirements of this chapter as determined to be applicable by the director. Wherever applicable, the director shall use the effluent requirements for non-domestic wastewater as set forth by the EPA. Construction plans and engineering reports for proposed non-domestic wastewater systems shall be sufficient in scope and depth for determining the adequacy of compliance with the provisions of section 11-62-02.

(e) Any building or facility which is located within the state agricultural land use district, county agricultural zoned districts or conservation districts may be exempt from the provisions of subchapters 2 and 3, provided that such buildings or facilities are essential to the operation of an agricultural enterprise or are consistent with the conservation district use intent. However, the owner shall submit for the director's approval plans or engineering reports or both for the wastewater systems proposed to accommodate the wastewater generated from any building or facility in this category. Such information submitted shall be sufficient in scope and depth for determining the adequacy of performance of the wastewater system in meeting the provisions of section 11-62-02.

(f) A holding tank except for public facilities in areas where the subsurface disposal of wastewater is prohibited or privy shall not be considered as an acceptable wastewater system.

(g) No person or the owner shall cause or allow any wastewater system to create or contribute to any of the following:

- (1) Human illness;
- (2) Public health hazard;
- (3) Nuisance;
- (4) Unsanitary condition;
- (5) Wastewater spill, overflow or discharge onto the ground or into surface waters;
- (6) Contamination or pollution of state waters;
- (7) Harborage of vectors, including insects and rodents;
- (8) Foul or noxious odors;

(9) Public safety hazard; and

(10) Contamination, pollution or endangerment of drinking waters. If any of the foregoing conditions exist, the owner shall notify the director immediately.

(h) In case of a violation of this chapter, the director shall initiate enforcement action against the owner(s) of the wastewater system and initiate enforcement action against other persons to have the offending condition abated, corrected, removed, destroyed or prevented. In addition, once a violation of this chapter occurs, the director shall order the owner of the wastewater system to take immediate actions to protect public health and safety.

(i) Upon request by the director, proposed wastewater systems in critical wastewater disposal areas shall be approved in writing or by rule by the respective county board of water supply or department of water supply.

(j) The construction of any wastewater system involving the subsurface disposal of wastewater shall be in compliance with applicable provisions of chapter 1123.

(k) If the appropriate county does not issue a building permit for a private building within twelve months after the director approves the construction of a wastewater system to serve the building or if the appropriate county revokes or rescinds a building permit and the building is to be served by a wastewater system, the director's approval to construct the wastewater system is automatically rescinded unless a request for an extension is made thirty days before the expiration of the twelve month period. One extension of six months may be approved by the director. Reapproval of any wastewater system for which the director's approval has been rescinded pursuant to this paragraph shall be based on the applicable rules in effect at the time the request for reapproval is made.

(1) Whenever a building modification is proposed, the wastewater system serving the building shall be required to meet the applicable requirements of this rule if:

(1) The existing wastewater system has created or contributed to any of the conditions noted in subsection (g);

(2) The existing wastewater disposal system has been pumped more than once within the last twelve months; or

(3) The existing wastewater system disposes untreated wastewater directly into the groundwater table.

(m) Actions of representatives of the department engaged in the evaluation and determination of measures required to effect compliance with this chapter shall in no way be taken as a guarantee that the wastewater systems approved will function in a satisfactory manner for any given period of time, or that the employees assume any liability for damages, consequential or direct, which are caused, or which may be caused, by a malfunction of these systems. (Auth: HRS //321-11, 322-8(a), 342D-2, 342D-4, 342D-5, 342D-15) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-6, 342D-50)

Historical note: /11-62-06(i) is substantially based on /11-62-06(h). [Eff 12/10/88; ren AUG 30 1991]; /11-62-06(k) is substantially based on upon /11-62-22(b). 12/10/88; R AUG 30 1991]

/11-62-07 Wastewater sludge disposal.

(a) This section describes the acceptable disposal methods for wastewater sludge. The director shall approve each wastewater sludge disposal plan including the necessary treatment and transportation of the sludge. The plan shall specify the manner of sludge disposal to be used pursuant to subsection (c).

(b) No person shall place or dispose of wastewater sludge into pits, subsurface disposal systems, state waters, or onto the ground except as provided by subsection (c).

(c) Wastewater sludge shall only be disposed of in the following manner:

- (1) By a private, county, or state solid waste disposal facility which has a permit pursuant to chapter 11-58, to accept wastewater sludge;
- (2) By reclamation or reuse for agricultural purposes as set forth by EPA regulations;
- (3) By incineration which meets all applicable requirements of chapter 11-60; or
- (4) By a private, county, or state wastewater system which has been given specific written authorization to accept and dispose of sludge [Eff 12/10/88; am and comp AUG 30 1991] (Auth: HRS //321-11, 322-8(a), 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-6, 342D-50)

/11-62-08 Specific requirements for wastewater systems.

(a) Intent.

(1) It is the intention of this section and subchapters 2 and 3 to set forth minimum requirements for the following purposes:

- (A) To clarify responsibilities of owners, engineers and the department;
- (B) To set minimum distance requirements so that minor nuisances are avoided;
- (C) To set minimum requirements to protect public health, safety, and welfare, and to protect the wastewater systems from malicious damage or unauthorized entry; and

(D) To emphasize the need for proper installation, operation and maintenance.

(2) This section and subchapters 2 and 3 also gives the engineer designing the wastewater system flexibility and design responsibility. The design engineer is responsible for the choice of equipment, types of treatment processes used, structural integrity, electrical components, disposal system designs, adequate work space, accessibility for operation, maintenance and repair, redundancy of major equipment and processes, corrosion control and all other major aspects of wastewater system design.

(b) No person shall construct or expand a wastewater system without the approval of the director. The following documents shall be submitted to the director prior to such approval:

(1) Construction plans prepared by or under the supervision of an engineer indicating the following:

- (A) Acreage and tax map key number(s) of the project site;
- (B) Plot plan drawn to scale showing the location of the proposed and any existing wastewater system and its distances from existing and proposed buildings, structures, legal boundaries, property lines, adjacent surface bodies of water, drinking water sources and existing public sewers within 2,000 feet of the nearest property line; and
- (C) Sufficient details to show compliance with all applicable requirements of this chapter.

(2) Sludge disposal plan prepared in accordance to section 11-62-07.

(c) Whenever applicable, the design flow of any development to be served by a wastewater system shall be based on Table I, except as provided by section 11-62-24(b).

(d) Measures to control public accessibility to proposed and existing treatment units shall be provided to prevent accidents, drownings, vandalism and interference with the treatment process. At a minimum, the provisions shall include:

(1) Fencing or other secured enclosures at least six feet in height for treatment units with exposed water surfaces or equipment; or

(2) Completely enclosed treatment units with unexposed water surfaces and equipment. Access openings to completely enclosed treatment unit(s) and equipment shall be secured and properly identified, and be large enough to remove equipment from the facility.

(e) No person shall use the area adjacent to or directly above proposed and existing wastewater systems for purposes or activities which may hinder or interfere with the operation and maintenance of the wastewater systems.

(f) No person shall operate a wastewater system unless that person or the owner of the wastewater system is authorized by the director in accordance with the applicable provisions of sections 11-62-23.1(e) and 11- 62-31.1(f) and the applicable provisions of chapter 11- 61, Mandatory certification of operating personnel in wastewater treatment facilities.

(g) All wastewater systems shall be constructed or expanded by a person meeting the requirements of section 444, HRS and any pertinent rules promulgated by the Department of Commerce and Consumer Affairs, State of Hawaii. (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5) (Imp: //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-6, 342D-50)

Historical note: /11-62-08(a) was based substantially on /11-62-21. [Eff 12/10/88; R AUG 30 1991]; /11-62-08(b) was based substantially on //11-62-23(a) (2) and 11-62-23(a) (6) . [Eff 12/10/88; R AUG 30 1991]; /11-62-08(c) was based substantially on /11-62-06(i). [Eff 12/10/88; ran AUG 30 1991]; /11-62-08(d) was based substantially on /11-62-23(d). [Eff 12/10/88; R AUG 30 1991]; /11-62-08(e) was based substantially on //11-62-23(f) and 11-62-31(f). [Eff 12/10/88; R AUG 30 1991]; /11-62-08(f) was based substantially on /11-62-22(a). [Eff 12/10/88; R AUG 30 1991]

TABLE I

Type of Establishment	Gallons		Wastewater	
	Per Person	Per Day	Strength	
	(Unless		Lbs. 8005	
	Otherwise	Per Person	Noted)	Per Day
Airports (per passenger)		5		0.06
Camps:				
Campground with central comfort stations	35			0.10
With flush toilets, no showers	25			0.06
Construction camps (semi-permanent)	50			0.15
Day camps (no meals served)	15			0.12
Resort camps (night and day) with limited plumbing	50			0.12
Luxury camps	100			0.17
Cottages and small dwellings with seasonal occupancy				
(2 persons per bedroom minimum)	100			0.17
Country/ clubs (per resident member)	100			0.12
Country clubs (per non-resident member present)	25			0.03
Dwelling (2 person per bedroom minimum)	100			0.17
Factories (gallons per person, per shift, exclusive of industrial wastes)	35			0.10
Hospitals (per bed space)	250+			0.20
Hotels with private baths				
(2 person per bedroom minimum)	100			0.17
Hotels without private baths	50			0.17
Institutions other than hospitals (per bed space)	125			0.17
Laundries, self-service (gallons per wash, i.e., per customer)	50			0.25
Mobile home parks (per space)	250			0.17
Motels with bath, toilet, and kitchen				

waste (per bed space)	50	0.15	
Motels (bed space)	60	0.12	
Picnic parks (toilet wastes only)			
(per picnicker)	5	0.06	
Picnic parks with bathhouses, showers,			
and flush toilets	10	0.10	
Restaurants (toilets and kitchen			
wastes per patron)	10	0.06	
Restaurants (kitchen wastes per meal served)	10	0.03	
Restaurants additional for bars and			
cocktail lounges	2	0.02	
Schools:			
Boarding	100	0.17	
Day, without gyms, cafeteria, or showers	15	0.04	
Day, with gyms, cafeteria, and showers	25	0.08	
Day, with cafeteria, lout without gyms			
or showers	20	0.06	
Service stations (per vehicle served)	10	0.06	
Swimming pools and bathhouses	10	0.06	
Theaters:			
Movie (per auditorium seat)	5	0.03	
Drive-in (per car space)	5	0.03	
Travel trailer parks without individual water and			
sewer hook-ups (per space)	50	0.12	
Travel trailer parks with individual water end sewer			
hook-ups (per space)	100	0.17	
Workers:			
Construction (at semi-permanent camps)	50	0.15	
Day, at schools and offices (per shift)	15	0.06	

@@Section title@//11-62-09 to 11-62-20 (Reserved)

SUBCHAPTER 2 WASTEWATER TREATMENT WORKS

/11-62-23.1 Specific requirements for wastewater treatment works.

(a) In addition to the requirements of section 11-62-08(b), the following documents shall be submitted to the director prior to approval:

(1) A written declaration signed and dated by the engineer that the proposed treatment works was designed to meet all applicable effluent requirements of section 11-62-26; and

(2) Certification by the owner of a proposed treatment works that the treatment works shall be operated and maintained in accordance with all of the provisions of the operation and maintenance manual developed pursuant to subsection (d)

(2). The owner shall make the operation and maintenance manual available to the operator of the treatment works and will further certify that, upon sale or transfer of ownership of the treatment works, the sale or transfer will include construction drawings, equipment manuals, operational data collected, and the appropriate transfer documents and provisions binding the new owner to the operation and maintenance manual.

(b) Proposed and existing treatment works shall be provided with a continuous effluent flow measuring device such that daily wastewater flow can be determined. For treatment works with design flows equal to or greater than 100,000 gallons per day, the continuous effluent flow measuring device shall include recording equipment to totalize or chart daily flows.

(c) The following distance requirements apply to proposed and existing treatment works:

(1) Treatment units, except as provided in paragraph (3), shall not be less than twenty- five feet from any property lines nor less than ten feet from any building and swimming pools;

(2) Disposal systems, excluding effluent irrigation systems, shall not be less than five feet from a property line nor less than five feet from any building; and

(3) Completely enclosed, locked, and ventilated equipment rooms used to house items such as blowers, motors, pumps, electrical controls, and chemical feeders shall not be less than five feet from property lines or less than ten feet from dwelling unit(s).

(d) No treatment works shall be inspected pursuant to subsection (e) unless the following documents are provided:

(1) A written declaration signed and dated by the engineer responsible for the preparation of the operation and maintenance manual for the treatment works, that the operation and maintenance manual meets paragraph (2) and that if the treatment works is operated in accordance with the manual, all applicable effluent requirements will be met; and

(2) An operation and maintenance manual prepared by the engineer. The manual shall, as a minimum, provide the details on the following:

(A) Operation and maintenance instructions for each pump station and treatment unit or process under normal and emergency conditions such as power outage and equipment malfunction;

(B) Operation and maintenance instructions for the disposal system including procedures for purging or chemical "shock loading" to prevent or eliminate biological growth in the subsurface disposal system;

(C) List of required sampling frequencies and analyses to be conducted by the operator;

(D) Troubleshooting, corrective, and preventive measures to be taken to maintain process control and treatment performance;

(E) Start-up procedures;

(F) Applicable state effluent requirements;

(G) Instructions on wasting and disposal of wastewater sludge;

(H) Manpower requirements needed to operate and maintain the treatment works;

(I) List of critical parts of the treatment works;

(J) "As-built" drawings of the treatment works;

(K) List of required daily activities, checks and observations;

(L) Logs or report forms for all operation and maintenance activities performed;

(M) Flow schematic diagrams with details of piping and valving;

(N) Plot plan of the treatment works and project site including all collection lines and equipment;

(O) Details on all safety equipment at the treatment works site, any applicable spare parts, maintenance and operation instructions; and

(P) Details on all monitoring equipment including spare parts, maintenance and operating instructions.

(e) No person shall operate a treatment works until the director has inspected and authorized it.

(1) Any discrepancy between the constructed treatment works and information supplied pursuant to this chapter is sufficient reason to withhold approval to operate the treatment works.

(2) Before operation of the treatment works, the owner shall resolve all discrepancies recorded as a result of the inspection conducted pursuant to paragraph (1).

(3) Any changes to the approved plan shall be resubmitted to the director for approval before the final inspection.

(f) After the first year of operation, the owner of the treatment works shall submit to the director a written statement based on the professional judgment of the owner's engineer whether or not the treatment works is meeting the

applicable effluent requirements of section 11-62-26. If the treatment works is not meeting the applicable effluent requirements, the owner shall submit to the director a corrective action report containing:

(1) An analysis of the cause of the treatment works' failure to meet the effluent requirements and an estimate of the scope of the corrective action necessary to enable the treatment works to be in compliance;

(2) A schedule for undertaking the corrective actions; and (3) A date by which the treatment works shall be in compliance with the applicable effluent requirements.

(g) Treatment works shall be designed with safety in mind and comply with appropriate provisions of the Occupational Safety and Health Standards of the State of Hawaii, Department of Labor and Industrial Relations.

(h) Upon abandoning, retiring or permanently discontinuing use of a treatment works, the owner shall render it safe by removing it or filling it completely with earth, sand, gravel or similar non-organic matter. All above ground portions of the treatment works shall be rendered safe and vector free. Electrical components shall be disconnected at the circuit breaker or source and all access openings sealed. Injection wells shall be abandoned in accordance with Chapter 11-23.

(i) The owners of proposed and existing treatment works or the owners' duly authorized agents shall perform the following tests and record keeping:

(1) Analysis of dissolved oxygen, pH and 30 minute settleability of the contents of the aeration tank, chlorine residual of the effluent and total daily flow at least once per week;

(2) Complete logs of operation and maintenance performed, repairs, volume of sludge wasted and name of sludge hauler/disposal firm if applicable; and

(3) For treatment works utilizing effluent irrigation systems, analysis of total coliform at least once per week.

(j) The test results and records required in subsection (i) shall be recorded, kept on site and a copy submitted to the director no later than thirty days after the quarters ending on March, June, September and December of each year.

(k) For public wastewater treatment works a facility plan shall be initiated when the actual wastewater flow reaches 75 per cent of the design capacity of the wastewater treatment works. Implementation of the recommendation of the facility plan shall be initiated when the actual wastewater flow reaches 90 per cent of the design capacity of the wastewater treatment works.

(l) Standby power or other provisions shall be provided for proposed and existing lift stations to prevent unauthorized discharges of wastewater during a primary power outage. [Eff AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5) (Imp: //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-6, 342D-50)

Historical note: /11-62-23.1(a) (1) was based substantially upon /11-62-23(a) (3). [Eff 12/10/88; R AUG 30 1991]; /11-62-23.1(a) (2) was based substantially upon /11-62-23(a)(4). [Eff 12/10/88; R AUG 30 1991]; /11-62-23.1(b) was based substantially upon /11-62-23(b). [Eff 12/10/88; R AUG 30 1991]; /11-62-23.1(c) was based substantially upon /11-62-23(e). [Eff 12/10/88; R AUG 30 1991]; /11-62-23.1(d) was based substantially upon /11-62-23(g). [Eff 12/10/88; R AUG 30 1991]; /11-62-23.1(e) was based substantially upon /11-62-23.1(h). [Eff 12/10/88; R AUG 30 1991]; /11-62-23.1(1) was based substantially upon /11-62-23(c). [Eff 12/10/88; R AUG 30 1991]

/11-62-24 Treatment unit requirements.

(a) For private wastewater treatment works of required design capacities of less than 100,000 gallons per day:

(1) Sludge digesters or aerated sludge holding tanks to treat and store at least the amount of sludge generated over a twenty day period shall be provided for proposed treatment works;

(2) Continuous disinfection of the treated effluent shall be provided for proposed and existing treatment works unless otherwise approved by the director;
(3) The aeration tank loading for proposed treatment works shall not exceed 12.5 pounds of BOD5 per 1,000 cubic feet. For the sequencing batch reactor process, food to microorganism (F/M) ratios shall be between 0.05 and 0.10.

(4) The detention time for proposed treatment units utilizing final settling tanks shall not be less than four hours and the surface overflow rate shall not exceed 300 gallons per day per square foot based on the average daily flow;

(5) Flow equalization shall be provided for proposed treatment works unless the engineer submits written justification that changes in normal daily flow rate or seasonal occupancy rates shall not affect the treatment unit's ability to meet continuous compliance with the effluent requirements of sections 11-62-25 and 11-62-26; 1

(6) Easy access shall be provided for proposed treatment works for operators to allow necessary operation, maintenance and repair. Completely enclosed treatment units with unexposed water surfaces and equipment shall not be allowed unless the design engineer can satisfy the director that provisions have been included to eliminate confined work areas and to allow accessibility for necessary operation, maintenance and repair; and

(7) For proposed and existing treatment units utilizing gas chlorination for disinfection, the following equipment shall be provided: chlorine gas leak detector and alarm, self contained breathing apparatus, chlorine gas mask, and an emergency eyewash and shower.

(b) Proposed private wastewater treatment works of required design capacity greater than or equal to 100,000 gallons per day and proposed county wastewater treatment works shall comply with the design standards of their respective counties. If a county does not have wastewater treatment works design standards, then the design standards of the City and County of Honolulu shall be used. [Eff 12/10/88, am and comp AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-6, 342D-50)

/11-62-25 Wastewater effluent disposal systems.

(a) Proposed subsurface disposal systems.

(1) Subsurface disposal systems shall at least consist of a primary disposal component and a 100 per cent back-up disposal component.

(2) The primary disposal component and the back-up disposal component shall each be designed to handle the peak flow. The peak flow shall be determined by multiplying the average flow by the Babbitt maximum factor (M.F.). For flows less than 10,000 gpd the M.F. value shall be 4.5. Other means of determining the peak flow, as recommended by the design engineer, may be approved by the director.

(3) Each disposal component shall be tested to accommodate the wastewater flow as required in paragraph (2).

(b) Effluent irrigation systems for proposed and existing treatment works.

(1) The owner(s) of an effluent irrigation system shall submit to the director the following information:

(A) Details of the area, type of vegetation to be irrigated and an assessment on the impact to the adjacent areas;

(B) Method and controls to be used in the irrigation system such that no runoff or ponding will occur;

(C) Method of controlling the public accessibility to the system and area to minimize the public contact with the effluent;

(D) Plan of action to adequately warn the public that effluent is being used for irrigation and that the water is unfit for human consumption; and

(E) How the piping and appurtenances are properly marked to distinguish potable water and sewage effluent.

(2) The owner of an effluent irrigation system shall provide adequate storage basin(s) or a backup disposal system to prevent any overflows or discharges from

the system when the irrigation system is not in operation or when wastewater effluent quantities exceed the irrigation requirements.

(c) For treatment works utilizing other disposal systems, design data and other pertinent data shall be submitted to and approved by the director on a case-by-case basis. Decisions by the director shall be guided by subchapter 1 and other applicable sections of this subchapter.

(d) Proposed and existing wastewater effluent disposal systems shall include provisions to facilitate operation, maintenance and inspection. [Eff 12/10/88, am and cored AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-6, 342D-50)

/11-62-26 Wastewater effluent requirements applicable to treatment works.

(a) All proposed and existing treatment works shall meet the requirements of this section. Nothing in this section shall be construed to prevent the engineer from applying more stringent requirements if the engineer determines that the particular design and circumstances for which the engineer is responsible warrants the more stringent requirements.

(1) Biochemical oxygen demand (BOD5). The BOD5 in the effluent from a treatment unit shall not exceed 30 milligrams per liter based on the arithmetic average of the results of the analyses of composite samples. In no case shall any grab sample exceed 60 milligrams per liter of BOD5.

(2) Suspended solids. The suspended solids in effluent from a treatment unit shall not exceed 30 milligrams per liter based on the arithmetic average of the results of the analyses of composite samples. In no case shall any grab sample exceed 60 milligrams per liter of suspended solids.

(3) Alternative effluent limitations as permitted by EPA regulations, (40 CFR 125 and 40 CFR 133), relating to the definition of secondary or other industrial categories, may be utilized by the director.

(4) For the purposes of this section, the arithmetic average of the results of the analyses of composite samples shall be based upon one or more analyses made within a 30 consecutive calendar day period. The arithmetic average shall be the sum of the results of all analyses divided by the number of analyses made during the 30 consecutive calendar day period.

(b) In addition to subsection (a), treatment works utilizing effluent irrigation systems shall provide continuous disinfection of the effluent. The number of total coliform organisms in the effluent from a treatment unit shall not exceed a median of 23/100-milliliters. The median number of total coliform shall be based on no less than five grab samples during a 30-day period. In no case shall any grab sample exceed 240/100 milliliters of total coliform. The sampling for total coliform analyses shall be taken at the effluent weir of the treatment unit. The director may specify coliform requirements which are more or less stringent than the requirements of this subsection. These requirements are to be based on public accessibility, methods of effluent reuse and public health considerations.

(c) In addition to subsection (a), treatment works utilizing a subsurface disposal system other than a soil absorption system shall maintain a chlorine residual of not less than 0.1 milligrams per liter in any grab sample prior to the disposal system.

(d) The analysis, including the handling and preservation of samples, to determine compliance with effluent requirements shall be performed in accordance with Standard Methods or EPA's Methods for Chemical Analysis of Water and Wastes. The director may approve alternative methods for analyzing the effluent limits of this section. The alternative test methods when approved, may be used by the director to determine compliance with effluent limits as stated in this rule. [Eff 12/10/88, am and comp AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-6, 342D-50)

//11-62-27 to 11-62-30 (Reserved)

SUBCHAPTER 3 INDIVIDUAL WASTEWATER SYSTEMS

/11-62-31.1 General requirements for proposed individual wastewater systems.

(a) Individual wastewater systems may be used as a temporary on-site means of wastewater disposal in lieu of wastewater treatment works under the following conditions:

(1) For residential developments.

(A) There shall be 10,000 square feet of land area for each individual wastewater system;

(B) Total development of an area shall not exceed fifty single family residential lots or exceed fifty dwelling units; and

(C) Area of the lot shall not be less than 10,000 square feet except for lots created and recorded before the effective date of this rule. For lots less than 10,000 square feet which were created and recorded before the effective date of this rule, only one individual wastewater system shall be allowed.

(2) Developments involving buildings other than dwellings.

(A) The wastewater flow generated shall not exceed 1000 gallons per day per 10,000 square feet of usable land area which shall not include the area under buildings;

(B) The total wastewater flow shall not exceed 15,000 gallons per day; and

(C) Area of the lot shall not be less than 10,000 square feet except for lots created and recorded before the effective date of this rule. For lots less than 10,000 square feet which were created and recorded before the effective date of this rule, only one individual wastewater system shall be allowed.

(b) Whenever an individual wastewater system is allowed under subsection (a) the following shall apply:

(1) An individual wastewater system may be used for two dwelling units which may or may not be located within the same building provided that both of the dwelling units are located on the same single family residential lot;

(2) A building may use more than one individual wastewater system where each individual wastewater system shall connect to a single dwelling unit;

(3) For buildings other than dwellings, more than one individual wastewater system may be used provided that the building is owned by one person; or

(4) For developments other than dwellings with highly variable wastewater flow rates, such as but not limited to schools, parks and churches, the individual wastewater system excluding cesspools may exceed a design flow rate of 1000 gallons per day provided that the development is owned by one person.

(c) The director may require the installation of dry sewers as a condition of approval of individual wastewater systems where:

(1) Public sewers exist but is at capacity such that connection is prohibited but remedial actions have been initiated to increase the public sewer capacity;

(2) Public sewers exists, but the treatment and disposal system is not complete or operational;

(3) Design of the public sewers has been completed and construction of the public sewers is imminent; and

(4) Conditions warrant such requirements.

(d) No cesspool shall be used as the wastewater system by any public building.

(e) Before the approval of an individual wastewater system excluding cesspools, the following requirements shall be satisfied:

(1) An operation and maintenance manual developed pursuant to section 11-62-23.1(d) (2) as applicable shall be submitted and approved by the director; and

(2) The owner of the individual wastewater system shall certify that the individual wastewater system shall be operated and maintained in accordance with all of the provisions of the operation and maintenance manual developed pursuant

to paragraph (1). The certification shall include that upon sale or transfer of ownership of the individual wastewater system, the sale or transfer will include the appropriate transfer documents and provisions binding the new owner to the operation and maintenance manual.

(f) No person shall operate an individual wastewater system until authorized in writing by the director.

(1) Written approval by the director shall be issued if, upon inspection of the installed- individual wastewater system and before being backfilled, the system complies with these rules and the approved plans and specifications.

(A) Before operation of the system the owner shall resolve all discrepancies recorded as a result of the inspections conducted.

(B) Any changes to the approved plans and specifications shall be submitted to the director for approval before final inspection.

(2) If the inspection is waived by the director, the engineer or contractor shall furnish a written statement to the director within 30 days after the completion of the construction certifying that the individual wastewater system was installed in accordance with the approved plans and specifications. Any deviations shall be noted and approved by the director before the individual wastewater system can initiate operation.

(g) A graywater system shall be designed in accordance with the following criteria:

(1) Design of graywater systems for dwelling units shall be based on a minimum graywater flow of 150 gallons per day per bedroom. The design flow of graywater systems for buildings other than dwellings or from specific graywater sources shall be determined on a case-by-case basis;

(2) Graywater tanks when required shall be sized with no less than a 600 gallon tank capacity and shall conform to the requirements of section 11-62-33.1(a); and

(3) Graywater may be conveyed to a sand filter, absorption trenches and beds, mounds or seepage pits or when disinfected in accordance with t section 11-62-26(b) used for irrigation. [Eff and comp AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-6, 342D-50)

Historical note: /11-62-31.1(a) was based substantially upon /11-62-31(a). [Eff 12/10/88; R AUG 30 1991]; /11-62-31.1(b) was based substantially upon //11-62-31(a) (1)(c) and 11-62-31(b). [Eff 12/10/88; R AUG 30 1991]; /11-62-31.1(d) was based substantially upon /11-62-31(g). [Eff 12/10/88; R AUG 30 1991]; /11-62-31.1 (e) (1) was based substantially upon /11-62-31(h) (2). [Eff 12/10/88; R AUG 30 1991]; /11-62-31.1(e) (2) was based upon /11-62-31(h) (4) . [Eff 12/10/88; R AUG 30 1991 -]; /11-62-31.1(f) was based substantially upon /11-62-31(e). [Eff 12/10/88; R] AUG 30 1991

/11-62-31.2 Site evaluation.

(a) Site evaluations shall conform in part to chapter 10 of the Ten States Standards. Other means of determining soil functions other than by soil profile observations may be acceptable to the director.

(b) The percolation test provisions for sandy soils of section 10.5.c of the Ten States Standards shall also be applicable for soils consisting of volcanic ash, volcanic cinders, fractured basalt and similar highly permeable material.

(c) If, during construction the actual site conditions differ from the site conditions upon which the wastewater system was approved, the design engineer shall revise the wastewater plans to reflect the actual site conditions. The plans of the revised wastewater system shall be submitted to the director for approval pursuant to section 11-62-31.1(f). [Eff and comp AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-50)

/11-62-32 Spacing of individual wastewater systems.

No individual wastewater system shall be located at any point having less than the minimum distances indicated in Table II unless otherwise approved by the director. The minimum distances indicated in Table II shall be measured from the outer edge of each item. [Eff 12/10/88, am and comp AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-6, 342D-50)

TABLE II

Minimum Horizontal Distance From	(ft)	Cesspool (ft)	Treatment Unit (ft)	Soil Seepage Pit System	Absorption System
Wall line of any structure or building			5	5	5
Property line		9	5	9	5
Stream, the ocean at the vegetation line, pond or lake			50	50	50
Large trees	10	5	10	10	
Seepage pit	18	5	12	5	
Cesspool	18				

@Body Single@

/11-62-33.1 Specific requirements for proposed treatment units.

(a) Septic tank.

(1) Septic tanks shall conform in part to section 20 of chapter 20, except for subsections 20.102 and 20.202, of the Ten States Standards.

(2) The following schedule shall apply to septic tank sizing:

No. of Bedrooms	Minimum Capacity (Gallons)
2 or less	750
3	900
4	1000
5	1250

(3) Concrete septic tanks shall be coated with an approved bituminous coating or protected from corrosion by acceptable means. The coating shall cover the entire tank interior.

(4) Septic tank covers shall be sufficiently strong enough to support whatever load may reasonably be expected to be imposed upon them and tight enough to prevent the entrance of surface water, dirt or other foreign matter and control the odorous gases of digestion.

(5) When septic tanks are installed in ground water, the engineer shall design adequate ground anchoring devices to prevent the tank from floating or crushing when emptied during normal cleaning operations.

(6) The excavation to receive the tank shall be large enough to permit the proper placement of the tank and backfill. Tanks shall be installed on a solid base that will not settle and shall be level. Where rock or other undesirable protruding obstructions are encountered, the bottom of the hole shall be excavated an additional six inches and backfilled with sand, crushed stone or gravel to the proper grade. Backfill around and over the septic tank shall be

placed in such a manner as to prevent undue strain or damage to the tank or connected pipes.

(7) When a septic tank is installed under a driveway, parking lot, in a heavy saturated soil or other areas subject to heavy loads, the tank shall be capable of withstanding an H-20 wheel load as defined by the American Association of State Highway officials.

(8) Effluent from a septic tank shall be discharged into a soil absorption system, sand filter or other treatment unit permitted by the director.

(b) Household aerobic units.

(1) Household aerobic units shall conform in part to section 21 of chapter 20, except for subsections 21.102, 21.201 and 21.202, of the Ten States Standards.

(2) Household aerobic units shall be approved by the director based upon the "Standard No. 40" for Class I units as set forth by the National Sanitation Foundation, dated May 1983. The performance data shall have been obtained by an agency such as a university or an independent research laboratory acceptable to the director or from the National Sanitation Foundation (NSF) Testing Laboratory, Ann Arbor, Michigan.

(3) Owners of proposed and existing household aerobic units shall have an active service contract for the proper maintenance of the aerobic unit. The contract shall also include pumping service to maintain the household aerobic unit. For proposed household aerobic units a copy of an executed service contract shall be submitted with the plans and specifications.

(4) In areas below (makai of) the Underground Injection Control Line established pursuant to chapter 11-23, a household aerobic unit may discharge its effluent directly into the groundwater provided the effluent is disinfected in accordance with subsection (d).

(c) Subsurface and recirculating sand filters shall conform to in part to chapter 50, except for subsections 50.202, 50.203, 50.301 and 50.504, of the Ten States Standards.

(d) Disinfection. Disinfection systems shall be designed to meet the effluent requirements of section 11-62-26(5). (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-50)

Historical note: /11-62-33.1(a)(2) was based substantially upon /11-62-33(b)(1). [Eff 12/10/88; R AUG 30 1991]; /11-62-33.1(5) (2) was based substantially upon /11-62-33(c) (1) . [Eff 12/10/88; R AUG 30 1991]; /11-62-33 1(b) (3) was based substantially upon /11-62-33(c) (2). [Eff 12/10/88; R AUG 30 1991]

/11-62-34 Specific requirements for proposed disposal systems.

(a) Absorption trenches.

(1) Absorption trenches shall conform in part to section 40 of chapter 40, except for subsections 40.201, 40.202, 40.203, 40.302, 40.502 and 40.505, of the Ten States Standards.

(2) The material used to cover the top of the stone shall be a filter fabric material or equal.

(3) The minimum area for any absorption trench system shall be based upon a flow of 200 gallons per bedroom per day and in accordance with Table I of the Manual of Septic Tank Practice.

(b) Deep absorption trenches. Deep absorption trenches may be considered where the depth of suitable soil is insufficient to permit the installation of a conventional trench system due to the presence of a limiting layer more than two feet in depth which overlies suitable soils of sufficient thickness.

Requirements for location, design, slope, material, construction and dosing system design contained in subsection (a) shall apply to deep absorption trenches except for depth of construction. In addition, the following design considerations shall apply:

(1) The site evaluation procedure shall include soil profile observations of at least three soil observation pits constructed to a minimum depth of three feet below the proposed trench bottom. Monitoring to establish depth to seasonal soil saturation or high groundwater may be considered;

(2) Deep absorption trenches shall be constructed at least one foot into the suitable soil; and

(3) The distribution piping in deep absorption trenches shall be installed with the invert of the piping at a depth of not more than thirty inches. Gravel or crushed stone shall be placed from the bottom of the trench excavation to a point two inches above the top of the distribution piping.

(c) Absorption beds.

(1) Absorption beds shall conform to section 42 of chapter 40, except for subsections 42.201, 42.202, 42.203, 42.302, 42.307, 42.502 and 42.505, of the Ten States Standards.

(2) The minimum area in any absorption bed shall be based upon a flow of 200 gallons per bedroom per day and in accordance with Table I of the Manual of Septic Tank Practice.

(3) Gravity fed absorption bed distribution lines should be at least four inches in diameter. If foot-long tiles are laid, they shall each be separated by a one-fourth inch space and the joint covered by a strip of filter fabric material or equal.

(4) The material used to cover the top of the stone shall be a filter fabric material or equal.

(d) Seepage pits.

(1) Seepage pits shall conform to section 43 of chapter 40, except for subsections 43.201, 43.202, 43.203, 43.304, 43.306 and 43.401 through 43.405, of the Ten States Standards.

(2) The minimum area in any seepage pit shall be based upon a flow of 200 gallons per bedroom per day and in accordance with Table I of the Manual of Septic Tank Practice.

(3) Sidewalls shall be properly protected against cave-in by means of approved types of concrete rings, hollow tile blocks or other approved materials. When hollow tiles are used, the minimum size block shall be eight by eight by sixteen inches. I (A) Excavation voids behind the hollow tiles, precast rings or other liners shall have a minimum backfill of six inches of clean I one-inch sized rocks or gravel or other similar material. I (B) When natural geological formulations are encountered which are sufficiently stable to prevent caving-in of sidewalls, such as rock, white coral or other similar t composition, the stable material may be used as sidewall lining in lieu of concrete rings or hollow tile blocks. The burden of demonstrating stability is on the engineer designing the seepage pit.

(4) The material used to cover the top of the stone or gravel surrounding the lining shall be a filter fabric material or equal.

(e) Elevated mound system.

(1) Elevated mound systems shall conform to section 44 of chapter 40, except for subsections 44.406 and 44.604, of the Ten States Standards.

(2) The material used to cover the top of the stone shall be a filter fabric material or equal.

(3) The minimum area for any elevated mound system shall be based upon a flow of 200 gallons per bedroom per day.

(f) Other disposal systems.

(1) Soil replacement system.

(A) Soil replacement systems may be used for sites with the following soils layers in the upper soil horizons:

(i) Soils with percolation rates less than one minute per inch; or

(ii) Soils with percolation rates greater than 60 minutes per inch that occur within the upper 5 feet of the soil and underlain by more permeable soils.

Installation guidelines shall comply with the requirements of very high permeability soils of subparagraph (B).

(B) Trenches may be excavated up to 36 inches in width to depths not to exceed five feet below grade nor closer than two feet to seasonal high groundwater level, provided any groundwater mounding induced by wastewater does not rise closer than one foot from the bottom of the excavation and bedrock is at least three feet below the bottom of the excavation.

(C) Soil replacement absorption trenches and beds shall follow the applicable provisions of subsection (a) and (b).

(2) Evapotranspiration systems shall conform to the requirements of section 7.3.2 of the October 1980 edition of the EPA Design Manual on Onsite Wastewater Treatment and Disposal Systems.

(3) Gravelless systems.

(A) Gravelless soil absorption systems may be used as an alternative to soil absorption systems as specified in subsections (a), (b) and (c).

(B) Design criteria, material specifications and other pertinent data shall be submitted to the director.

(C) The total area of the soil absorption system for the gravelless system shall be the same as specified in subsections (a), (b) and

(c). [Eff and comp AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5)

(Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-50)

Historical note: /11-62-34(d) (3) was based substantially upon /11-62-33(a)(3)(m). [Eff 12/10/88; R AUG 30 1991]

/11-62-35 Other proposed individual wastewater systems.

(a) The specific design requirements for composting toilets, incinerator toilets, natural systems and other individual wastewater systems not specifically covered in this rule shall be reviewed and approved by the director on a case-by-case basis. Such products, if sold in Hawaii, shall be approved by the director based on appropriate testing procedures and standards as set forth by the National Sanitation Foundation (NSF) Testing Laboratory, Ann Arbor, Michigan. The performance data shall be obtained by an agency such as an university or an independent research laboratory acceptable to the director or from the NSF.

(b) The director may approve an innovative wastewater system based on the following conditions:

(1) The innovative system provides or may provide a benefit to the people of the State;

(2) The owner of the innovative system shall agree that for a period of up to twelve months after the initiation of the operation of the innovative system, operational data shall be gathered and submitted to the director; and

(3) The owner shall submit a written agreement stating that should the director at any time find the operation of the innovative system unsatisfactory, the owner shall promptly repair or modify the system, or replace it with another acceptable system.

(c) Cesspools.

(1) The director may waive the requirement of retaining a professional engineer to design a cesspool on a case-by-case basis if sufficient information is available to determine that the site conditions will satisfy the requirements of this subsection.

(2) A cesspool used as an individual wastewater system shall have the inlet pipe at least 10 feet above the bottom of the cesspool with at least 5 feet of suitable soil from the bottom of the cesspool to the highest known level of the groundwater table. The ultimate depth required shall be determined by the engineer based on actual soil materials encountered on the site or on the record of experience with the performance of cesspools in the area.

(3) A cesspool used as an individual wastewater system shall have the inlet pipe at least one and one-half feet below the finished ground surface.

(4) Each cesspool shall have a clear opening of at least six feet in diameter.

(5) Sidewalls shall be properly protected against cave-in by means of approved types of concrete rings, hollow tile blocks, or other approved materials. When hollow tiles are used, the minimum size of the block shall be eight by eight by sixteen inches.

(A) Excavation voids behind the hollow tiles, precast rings or other liners shall have a minimum backfill of six inches of clean one-inch sized rocks or gravel, or other similar sized material.

(B) When natural geological formations are encountered which are sufficiently stable to prevent caving of sidewalls, such as rock, white coral, or other similar composition, the stable material may be used as sidewall lining in lieu of concrete rings or hollow tile blocks. The burden of demonstrating stability is on the person seeking to use said formation as sidewall lining.

(6) A structurally sound reinforced concrete cover shall be provided. The cover shall protrude at least twelve inches beyond the perimeter of the unlined cesspool and resting on firm ground with substantially stable sidewalls. Excavations requiring sidewall linings with either hollow tile blocks or precast concrete rings, shall have the reinforced concrete covers equal to the outside diameter of the linings. At least one watertight manhole, either round or square, tapered to a minimum of twelve inches in dimension shall be provided in the cover for inspection or for emptying of the contents when required. The top of each cover shall be at least twelve inches below the finished ground surface. [Eff and comp AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-6, 342D-50)

Historical note: /11-62-35(c) was based substantially upon /11-62-33(a). [Eff 12/10/88; R AUG 30 1991].

//11-62-36 to 11-62-40 (Reserved)

SUBCHAPTER 4 VARIANCES, PENALTIES AND SEVERABILITY

/11-62-41 Variances.

Variances and variance applications shall comply with section 342D-7, HRS. Variance application forms shall be provided by the department. All applications for variances shall be submitted with a filing fee of \$200 for each application. Additionally, the applicant shall pay all fees assessed for publishing the legal notice(s) for each variance application. If a public hearing is required, the applicant shall pay all fees assessed for publishing the public hearing notice(s). Any government agency shall be exempt from paying the filing fee and publication costs. [Eff 12/10/88, am and comp AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5, 342D-13) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-5, 342D-7, 342D-50)

/11-62-42 Penalties and remedies.

Any person who violates any provision of this chapter shall be subject to the penalties and remedies for violations provided for in chapters 321, 322-part I and 342, HRS. [Eff and comp AUG 30 1991] (Auth: HRS //321-11, 322-8(a), 342D-1, 342D-2, 342D-4, 342D-5) (Imp: HRS //321-11, 322-1 to 322-4, 322-8, 322-9, 342D-2, 342D-4, 342D-5, 342D-11, 342D-18, 342D-30, 342D-31, 342D-50, 603-23)

/11-62-43 Severability.

If any provision of this chapter or its application to any person or circumstance is held invalid, the application of such provision to other persons or circumstances, and the remainder of this chapter, shall not be affected

thereby. [Eff and comp AUG 30 1991] (Auth: HRS //321-11, 342D-2, 342D-4, 342D-5)
(Imp: HRS //321-11, 322-1 to 322-4, 322-8, 342D-2, 342D-4, 342D-19, 342D-50)